UNITED STATES PATENT AND TRADEMARK OFFICE

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09/722,168	11/22/2000	Clifford Brown	21-006	3876

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte CLIFFORD BROWN and JAMES E. BARKER

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Appeal 2009-004864
Application 09/722,168
Technology Center 2600

_____

Before JOSEPH F. RUGGIERO, MAHSHID D. SAADAT, and CARLA M.
KRIVAK, *Administrative Patent Judges.*

RUGGIERO, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

STATEMENT OF THE CASE

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[1] The two-month time period for filing an appeal or commencing a civil
action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing,
as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE"
(paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery
mode) shown on the PTOL-90A cover letter attached to this decision.

Appellants appeal under 35 U.S.C. § 134 from the Final Rejection of claims 1, 4, 14, 18, 54, 62, and 70. Claims 17, 19, 33-53, and 73-80 are allowed, and claims 3, 5-13, 40, and 56-61 have been indicated by the Examiner to be allowable subject to being rewritten in independent form. Claims 2, 15, 16, 20-32, 55, 63-69, 71, and 72 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (amended, filed May 21, 2008), the Answer (mailed September 10, 2008), and the Reply Brief (filed November 10, 2008) for the respective details. We have considered in this decision only those arguments Appellants actually raised in the Briefs. Any other arguments which Appellants could have made but chose not to make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Appellants' Invention

Appellants' invention relates to the automatic diagnosing of impairments, such as phase noise, compression, and interference, in a digital quadrature amplitude modulated (QAM) signal. (*See generally* Spec. 5:1-11).

Claim 1 is illustrative of the invention and reads as follows:

1.   A device for detecting impairments in a digital quadrature amplitude modulated signal comprising:
    a phase noise detector comprising;
        a sorter;
        a rotator coupled to the sorter; and

a comparator coupled to the rotator;
a compression detector;
an interference detector; and
a constellation storage coupled to the phase noise detector, the
compression detector, and the interference detector.

The Examiner's Rejections

The Examiner's Answer cites the following prior art reference:

Armstrong   US 4,381,546   Apr. 26, 1983

Claims 1, 4, 18, and 54 stand rejected under 35 U.S.C. § 102(b) as
being anticipated by Armstrong.

Claims 14, 62, and 70 stand rejected under 35 U.S.C. § 103(a) as
being unpatentable over Armstrong.

ISSUES

Based on Appellants' contentions, as well as the findings and
conclusions of the Examiner, the pivotal dispositive issue before us is
whether the Examiner erred in finding that the calculating means 18 of
Armstrong corresponds to the claimed sorter. The issue turns on whether the
Examiner erred in determining that Armstrong's disclosure (col. 3, ll. 44-68)
of the sequential reading of X and Y data from a receiver by calculating
means 18 during each baud time interval corresponds to a sorting operation.

ANALYSIS

35 U.S.C. § 102(b) Rejection

Appellants' arguments contend that, in contrast to the requirements of each of the rejected independent claims 1, 18, and 54, Armstrong has no disclosure of a phase detector which includes a sorter. As described in Appellants' disclosure, the claimed sorter operates to assign constellation data points to a particular cell based on which square of an overlaid grid a datum point might lie (Spec. 10:3-8). According to Appellants (App. Br. 14, 15; Reply Br. 6), the disclosure in the portion of Armstrong (col. 3, l. 44-68) relied upon by the Examiner (Ans. 4 and 6), which merely describes the sequential reading of X and Y data from a receiver by calculating means 18 during each baud time interval, would not be recognized by an ordinarily skilled artisan as corresponding to the claimed sorter.

We agree with Appellants. We find nothing in the cited portion of Armstrong, or elsewhere in the document, which could reasonably be construed as disclosing a sorting operation. In our view, an ordinarily skilled artisan would recognize that a sort operation requires, at a minimum, an ordering or grouping according to a common characteristic. As argued by Appellants, however, a sequential reading of received data, as disclosed by Armstrong, does not directly or inherently imply that a sort is being performed.

In view of the above discussion, since all of the claim limitations are not present in the disclosure of Armstrong, we do not sustain the Examiner's 35 U.S.C. § 102(b) rejection of appealed independent claims 1, 18, and 54, nor of claim 4 which is dependent on claim 1.

35 U.S.C. § 103(a) Rejection

We also do not sustain the Examiner's obviousness rejection, based on Armstrong, of dependent claims 14 and 62 and independent claim 70. Each of these claims includes a specific recitation of a sorter, although associated with an interference detector rather than a phase detector as in previously discussed claims 1, 4, 18, and 54. The Examiner again relies on the portion of Armstrong (col. 3, ll. 43-68) which describes the sequential reading of X and Y data from a receiver by calculating means 18 during each baud time interval. For all of the previously discussed reasons, the cited portion of Armstrong does not describe any operation of calculating means 18 by which an ordinarily skilled artisan would conclude that the calculating means 18 could be considered a sorter as claimed.

CONCLUSION

Based on the findings of facts and analysis above, we conclude that the Examiner erred in rejecting claims 1, 4, 18, and 54 for anticipation under 35 U.S.C. § 102(b), and in rejecting claims 14, 62, and 70 for obviousness under 35 U.S.C. § 103(a).

DECISION

The Examiner's decision rejecting claims 1, 4, 18, and 54 under 35 U.S.C. § 102(b) and claims 14, 62, and 70 under 35 U.S.C. § 103(a) is reversed.

REVERSED

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